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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/747,442	12/26/2000	Wolfgang Daum	9D-HR-19571 - Daum et al	1702

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EXAMINER	
LEE, BENJAMIN C	

ART UNIT	PAPER NUMBER
2612	

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/747,442	DAUM ET AL.	
	Examiner	Art Unit	
	Benjamin C. Lee	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *3/28/06*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response To Amendment

Claim Status

1. Claims 1-15 are currently pending.

Claim Rejections - 35 USC § 103

2. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bailey et al. (US pat. #6,731,201) in view of Kido (US pat. #5,079,688) and Udren (US pat. #4,471,399)

1) Regarding claims 1 and 10, Bailey et al. disclosed a power line communication system comprising a communication interface (300, see Fig. 3A) for interfacing an appliance (100) with a power line carrier communication system (see Fig. 1B), wherein the power line communication system transmits a data message relating to an appliance command (col. 1, lines 20-22 and col. 4, lines 1-6), comprising: at least one power line connection (345 and 346) for coupling said communication interface to a power line (through 221/222 or 217/219 to 225/227, Fig. 2); at least one appliance communication connection (321, 323, 325) for coupling said communication interface to an appliance (through 212/215, see Fig. 2); and processing circuitry (320, 330, 340) for receiving a power line carrier transmission including the message and translating the power line carrier transmission between a power line communication protocol and an appliance communication protocol, for transmitting the received message data to the appliance (col. 5, lines 64-67; col. 6, lines 41-44 and col. 7, lines 11-19); and discloses use of coded data communication (col. 4, lines 9-15; col. 7, lines 14-15) and also suggests use of digital data at least at the processing stage (col. 4, lines 25-28); except: the claimed diagnostic module

configured to diagnose the power line, said module comprising a power line measurement connection for coupling said diagnostic module to the power line.

However, it has been known to diagnose a power line using a diagnostic module comprising a power line measurement connection for coupling said diagnostic module to the power line, so as to indicate a monitored fault condition of the power line, such as taught by Kido (see e.g. Abstract and figures and corresponding disclosure) which discloses monitoring/diagnosing a power line failure or the device's own failure by monitoring a low voltage condition, while Udren teaches in the same power line communication art the monitoring/diagnostic of the power line fault by monitoring not only voltage parameter but also current parameter (fault detector 60 of Figs. 7-8; col. 3, lines 7-32).

In view of the teachings by Bailey et al., Kido and Udren, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include a power line diagnostic module such as taught by Kido in a system involving the power line such as taught by Bailey et al. so that a fault condition of the power line can be monitored and determined for situational/conditional awareness of the power line condition in which the power line communication system and appliance system depended upon, and furthermore to expand fault monitoring/diagnostics by including both voltage and current parameters so that faults involving either or both parameters can be diagnosed and monitored..

2) Regarding claim 2, Bailey et al., Kido and Udren render obvious all of the claimed subject matter as in claim 1, including the claimed signal processor (PLC Transceiver 330 of Bailey et al.) and communications processor (protocol translator 32, see col. 7, lines 11-19).

3) Regarding claims 3 and 11, Bailey et al., Kido and Udren render obvious all of the claimed subject matter as in claims 1 and 10, respectively, and Bailey et al. discloses that the appliance communication (204, 231 in Fig. 2., 321, 323, 325 in Fig. 3A; also see Fig. 4) is a serial bus connection (col. 4, line 35, col. 4, line 65 to col. 5, line 11).

4) Regarding claims 4 and 12, Bailey et al., Kido and Udren render obvious all of the claimed subject matter as in claims 1 and 10, respectively, and Bailey et al. discloses a bi-directional appliance communication connection (transmit and receive lines 215, 212 in Fig. 2; also see Fig. 3D for Tx, Rx lines; also see col. 6, line 53 to col. 7, line 19).

5) Regarding claims 5 and 13, Bailey et al., Kido and Udren render obvious all of the claimed subject matter as in claims 1 and 10, and Bailey et al. discloses a bi-directional power line carrier connection (col. 6, line 39 to col. 7, line 19).

6) Regarding claim 6, Bailey et al., Kido and Udren render obvious all of the claimed subject matter as in claim 1, and Bailey et al. discloses that the appliance communication connection comprises a signal line (Tx 321, Rx 323) and a signal ground line (Gnd, 325). See Figs. 3A and 3D.

7) Regarding claims 7 and 14, Bailey et al., Kido and Udren render obvious all of the claimed subject matter as in claims 1 and 10, respectively; and Bailey et al. discloses a buffer (3203 in Fig. 3D, also see col. 8, line 34).

8) Regarding claim 8, Bailey et al., Kido and Udren render obvious all of the claimed subject matter as in claim 1, wherein:

Although Bailey does not specifically disclose that the processing circuit comprises the claimed general purpose UART, Bailey in col. 4, lines 39-48 discloses the use of UART

software/protocol in the appliance's controller to allow it to communicate through communication port 204. It would have been obvious to one of ordinary skill in the art at the time of the claimed invention that such software/protocol would have been included in the processing circuitry of the communication module 300 of Bailey in order to provide the two-way communications and translations capability between the appliance and different communications media in a system such as taught by Bailey et al., Kido and Udren.

9) Regarding claims 9 and 15, Bailey et al., Kido and Udren render obvious all of the claimed subject matter as in claims 1 and 10, respectively, including:

--the claimed said power line connection comprises at least one of a 120V or 240V power line connection (Fig. 1B and col. 3, lines 44-46 of Bailey et al.)

Response to Arguments

3. Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments are directed to newly added limitations (power line diagnostic module involving plurality of parameters) lacking in Bailey et al. and Kido The above rejection was been made using new grounds in the form of the combination of Bailey et al., Kido and Udren. See above rejection for detail.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1) US 4296450

--Another known power line diagnostic system/method involving voltage and current level parameters (Abstract).

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin C. Lee whose telephone number is (571) 272-2963. The examiner can normally be reached on Mon -Thu 11:00Am-7:30Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Wu can be reached on (571) 272-2964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Benjamin C. Lee
Primary Examiner
Art Unit 2612

B.L.